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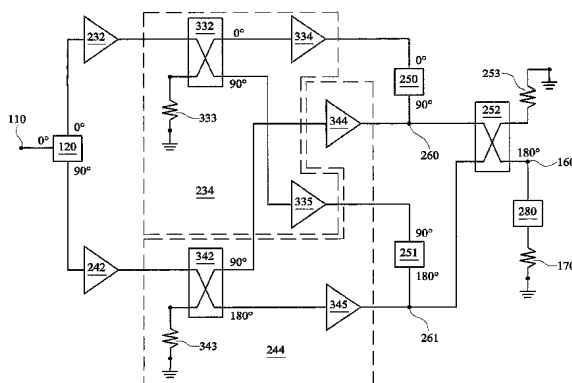
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(54) Title: A DOHERTY AMPLIFIER



(57) Abstract: A Doherty amplifier is described which comprises: a power splitter (120) having a first output and a second output, wherein the first output is connected to a main power splitter (392) having first and second outputs which differ in phase by 90°; and the second output is connected to an auxiliary power splitter (342) having first and second outputs which differ in phase by 90°; a main final stage amplifier (234) comprising first (324) and second (325) main paired amplifiers, the inputs of which are connected to the first and second outputs of the main power splitter (352); an auxiliary final stage amplifier (244) comprising first (344) and second auxiliary (345) paired amplifiers, the inputs of which are connected to the first and second outputs of the auxiliary power splitter (342); wherein the output from the first main paired amplifier (334) is connected to the output from the first auxiliary paired amplifier (344) by an impedance inverter (250); and the output from the second main paired amplifier (335) is connected to the output from the second auxiliary paired amplifier (345) by an impedance inverter (251); the amplifier being arranged such that a relative phase shift is introduced to the signals input to the main and auxiliary power splitters to offset the phase shift of the impedance inverters.